

Appl. No. : 10/760,126
Filed : January 16, 2004

AMENDMENTS TO THE CLAIMS

Please amend Claims 9 and 16 as indicated below. Please also add new Claims 22-26.

Claims 1-8 (**Canceled**).

9. **(Currently amended)** A method for controlling battery power comprising the acts of:

selectively providing a first external power source or a second external power source to a device coupled to a system power terminal;

coupling an internal battery to the system power terminal via a series-connected transistor; and

charging the internal battery by linearly regulating the transistor with an adjustable voltage at a control terminal of the transistor to conduct a charging current in a first direction from the system power terminal to a positive battery terminal during a charging mode, wherein the level of the charging current provided to the internal battery is linearly adjusted controlled by the level of the adjustable voltage to prevent a supply current from exceeding a predefined threshold.

10. **(Original)** The method of Claim 9, further comprising the act of discharging the internal battery by regulating the transistor to conduct a discharging current in a second direction from the positive battery terminal to the system power terminal during a discharging mode.

11. **(Original)** The method of Claim 9, wherein the impedance of the transistor varies to limit the level of the charging current.

12. **(Original)** The method of Claim 9, wherein the charging mode occurs when the voltage on the system power terminal is greater than the voltage of the internal battery.

13. **(Original)** The method of Claim 10, wherein the discharging mode occurs when the voltage on the system power terminal is less than the voltage of the internal battery.

14. **(Original)** The method of Claim 10, wherein the discharging mode occurs in response to a discharge command.

15. **(Canceled)**.

Appl. No. : 10/760,126
Filed : January 16, 2004

16. **(Currently amended)** A method for controlling power to a battery, the method comprising:

selectively providing an external primary power source or an external secondary power source to a system power terminal of a device with an internal battery;

coupling the internal battery to the system power terminal through a transistor; and

adjusting driving a control terminal of the transistor with a driving signal having linearly adjustable voltage levels to linearly regulate the level of current conducted by the transistor to charge the internal battery, wherein the level of current provided to the internal battery is determined by the voltage level of the driving signal.

17. **(Previously presented)** The method of Claim 16, wherein the external primary power source is an AC adapter and the external secondary power source is a Universal Serial Bus power interface.

18. **(Previously presented)** The method of Claim 16, further comprising:

sensing current supplied by the external secondary power source and generating an associated current sense signal;

comparing the current sense signal with a threshold value; and

overriding the driving signal to reduce the transistor's current level when the current sense signal exceeds the threshold value.

19. **(Previously presented)** The method of Claim 16, wherein the transistor is a P-channel enhancement mode MOSFET with a source terminal coupled to the system power terminal and a drain terminal coupled to the internal battery.

20. **(Previously presented)** The method of Claim 16, wherein the transistor is a MOSFET with a configurable body contact.

21. **(Previously presented)** The method of Claim 16, wherein the external secondary power source is automatically disconnected from the system power terminal when the external primary power source is connected.

22. **(New)** The method of Claim 20, wherein the configurable body contact is coupled to the system power terminal during a charging mode and to the internal battery during a discharging mode.

Appl. No. : **10/760,126**
Filed : **January 16, 2004**

23. (New) The method of Claim 20, wherein the configurable body contact is coupled to a transistor terminal with a relatively higher voltage during a shutdown mode to prevent current flow in a body diode and thereby fully disconnecting the internal battery from the system power terminal.

24. (New) The method of Claim 20, further comprising using a comparator with inputs coupled across the transistor to sense a voltage polarity of the transistor an output to control connections for the configurable body contact.

25. (New) The method of Claim 9, further comprising the act of sensing a voltage difference between the system power terminal and the positive battery terminal to generate a feedback control signal usable for varying the level of the adjustable voltage at the control terminal of the transistor.

26. (New) The method of Claim 9, wherein the transistor fully disconnects the internal battery from the system power terminal during a disable mode.